Federal Democratic Republic of Ethiopia

EDICT OF GOVERNMENT

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ET 49 (2001) (English): COTTONSEED OIL - SPECIFICATION

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ETHIOPIAN STANDARD

ES 49:2001

Second edition

Cottonseed oil —Specification

ICS:

Published by Ethiopian Standards Agency

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Foreword

This Ethiopian Standard has been prepared under the direction of the Technical Committee for Animal and vegetables fats and oils (TC 23) and published by the Ethiopian Standards Agency (ESA).

The standard is a reaffirmation for reprint of the Ethiopian Standard ES 4 :2001 oils-Specification with some editorial changes without altering the technical contents in the former text.

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Cottonseed oil—Specification

1 Scope

This Ethiopian Standard specifies the requirements for crude and refined cottonseed oil.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Ethiopian Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Ethiopian Standard are encouraged to investigate the possibility of applying the most recent editions of the Ethiopian Standards indicated below. Registers of currently valid standards are maintained in the Ethiopian Standards Agency.

ES 42, *Specification for additives*.

ES 51, *Edible vegetable oils - packing*.

ES 56, *Animal and vegetable fats and oils - Determination of relative density.*

ES 65, *Animal and vegetable fats and oils - Determination of soap content.*

ES 66, *Animal and vegetable fats and oils - Determination of iron content.*

ES 67, *Animal and vegetable fats and oils - Determination of copper content.*

ES ISO 660, *Animal and vegetable fats and oils - Determination of acid value and acidity.*

ES ISO 661, *Animal and vegetable fats and oils - Preparation of test sample.*

ES ISO 662, *Animal and vegetable fats and oils - Determination of moisture and volatile matter content.*

ES ISO 663, *Animal and vegetable fats and oils - Determination of insoluble impurities content.*

ES ISO 3596-1, *Animal and vegetable fats and oils - Determination of unsaponifiable matter.*

ES ISO 3657, *Animal and vegetable fats and oils - Determination of saponification value.*

ES ISO 3960, *Animal and vegetable fats and oils - Determination of peroxide value.*

ES ISO 3961, *Animal and vegetable fats and oils - Determination of iodine value.*

ES ISO 5555, *Animal and vegetable fats and oils - Sampling.*

ES ISO 6320, *Animal and vegetable fats and oils - Determination of refractive index.*

ES ISO 15305, *Animal and vegetable fats and oils - Determination of Lovibond colour.*

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3 Definitions

For the purpose of this standard, the following definitions shall apply.

3.1
crude cottonseed oil
any product obtained from the decorticated seeds of the cultivated species of (Gossypium L.) by expression and/or solvent extraction which must be subjected to further processing in order to make it suitable for human consumption

NOTE: - Filtration is considered as part of expression and/or extraction.

3.2
edible refined cottonseed oil
any product obtained from decorticated seeds of the cultivated species of (Gosspium L.) by expression and/or solvent extraction which has been degummed with acid, neutralized with alkali, bleached with bleaching earth and/or activated carbon and deodorized by steam distillation or any other acceptable commercial process.

4 Requirements

4.1 Manufacture

The oil shall be obtained from good quality, clean and sound cottonseed by a process of expression and/or extraction.

4.2 Objectionable matter

The oil shall be free from suspended and deposited impurities, admixture with other oils and fats, foreign material, (contaminants) separated water, and rancid odour and taste.

4.3 Additives

The limits for additives specified in ES 42 shall not be exceeded.

4.4 Physical and chemical requirements

The physical and chemical characteristics of crude and refined cottonseed oil shall conform to the requirements specified in the Table below.

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Table – Physical and chemical characteristics

Characteristics	Requirement		
	Crude	Refined	Test method
Colour in a 2.54 cm cell on the lovibond colour scale expressed as Y + 5R	Characteristic colour of the product	Characteristic colour of the product	ES ISO 15303
Relative Density at 20^0C	0.918 - 0.926	0.918 - 0.926	ES 56
Refractive Index at 40^0C	1.458 - 1.466	1.458 - 1.466	ES ISO 6320
Acid Value and acidity, mg KOH/g, oil max.	10	0.6	ES ISO 660
Saponification Value, mg KOH/g oil	189 - 198	189 - 198	ES ISO3657
Iodine Value (Wijs), g/100g	99 - 119	99 - 119	ES ISO 3961
Unsaponifiable matter, % (m/m), max.	2 expressed; 2.5 solvent extracted	1.5	ES ISO 3596
Peroxide Value milli equivalents peroxide Oxygen/kg, max.	-	10	ES ISO3960
Moisture and volatile matter at 103^0C, % (m/m), max.	0.25	0.2	ES ISO 662
Insoluble impurities %, (m/m), max.	1.0	0.05	ES ISO663
Soap content % ,(m/m), max.	-	0.005	ES 65
Iron (Fe), mg/kg, max	5	1.0	ES 66
Copper (Cu), mg/kg, max.	0.4	0.1	ES 67

5 Sampling

5.1 Samples shall be taken in accordance with ES ISO 5555.

5.2 The contract sample shall be prepared in accordance with ES ISO 661.

6 Packing

Edible cottonseed oil shall be packed in accordance with ES 51.

7 Labelling

Each container of edible cottonseed oil shall be labeled with the following information:

a) name of the product;

b) name and address of the manufacturer;

c) net contents;

d) date of manufacture; and

e) expiry date.

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8 Marking

Each container of edible cottonseed oil shall be marked with the Quality Mark upon approval by the Ethiopian Standards Agency.

9 Designation

In making orders and in technical and commercial documents Refined Edible Cottonseed Oil (RECO) and Crude Cottonseed Oil (CCO) shall be designated as follows:

RECO/ES 49:2001.

CCO/ES 49:2001.

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Ethiopian Standards Agency

Organization and Objectives

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia established in 2010 based on regulation No. 193/2010.ESA is established due to the restructuring of Quality and Standards Authority of Ethiopia (QSAE) which was established in 1970.

ESA's objectives are:-

- ❖ Develop Ethiopian standards and establish a system that enable to check weather goods and services are in compliance with the required standards,
- ❖ Facilitate the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational Institutions, research institutes, government organizations, certification, inspection, and testing organizations, regulatory bodies, consumer association etc. The requirements and/ or recommendations contained in Ethiopian Standards are consensus based that reflects the interest of the TC representatives and also of comments received from the public and other sources. Ethiopian Standards are approved by the National Standardization Council and are kept under continuous review after publication and updated regularly to take account of latest scientific and technological changes.
Orders for all Ethiopian Standards, International Standard and ASTM standards, including electronic versions, should be addressed to the Documentation and Publication Team at the Head office and Branch (Liaisons) offices. A catalogue of Ethiopian Standards is also available freely and can be accessed in from our website.

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International Involvement

ESA, representing Ethiopia, is a member of the International Organization for Standardization (ISO), and Codex Alimentarius Commission (CODEX). It also maintains close working relations with the international Electro-technical Commission (IEC) and American Society for Testing and Materials (ASTM).It is a founding member of the African Regional Organization for standardization (ARSO).

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